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DB=USPT; PLUR=YES; OP=ADJ			
L9	L3 and (webpage$ or website$ or www or workld wild web)	0	L9
L8	L6 and hyperlink$6	0	L8
L7	L6 and hyperlink$6 same (webpage or website)	0	L7
L6	L4 and relation$3 same (database or network$)	1	L6
L5	L4 and data same model$3 same entiti$3 same text$3 same (gui or graphic$ user interfac$3)	0	L5
L4	L1 and (manage$6 or plan$8) same (project or business$)	3	L4
L3	L1 and manage$6 same project	0	L3
L2	L1 and mang$6 same project	0	L2
L1	(5799286 or 5721913 or 5864480).pn.	3	L1

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L4	L1 and (manage$6 or plan$8) same (project or business$)	3	L4
L3	L1 and manage$6 same project	0	L3
L2	L1 and mang$6 same project	0	L2
L1	(5799286 or 5721913 or 5864480).pn.	3	L1

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L6: Entry 1 of 1 File: USPT Aug 25, 1998

DOCUMENT-IDENTIFIER: US 5799286 A
TITLE: Automated activity-based management system

Abstract Text (1):
An automated activity-based management system and method (10) for making thereof are provided. A business organization has costs associated with its employees, facilities, equipment, and overhead to produce products or provide services. Such a business organization typically generates traditional general ledger accounting information (152) and human resources information (150). This traditional accounting information (150, 152, 154) is used along with information directed to activities, equipment usage and facilities utilization to generate costs associated with activities performed by the organization. A computer workstation (40) with a graphical user interface (42) is used to accept entries of activity information (74). The activity information and traditional accounting information are fed to a relational database (12). The information is processed and costs associated with the employee, facilities, equipment, and overhead components (20, 22, 24, 26) of activities are computed. User-definable ad-hoc reports as well as preformated reports for trending, forecasting, comparison, benchmarking, and budgeting purposes are generated.

US Patent No. (1):
5799286

Brief Summary Text (2):
This invention is related in general to the field of business accounting systems. More particularly, the invention is related to an automated activity-based management system.

Brief Summary Text (4):
Conventional costing and management decision support systems use traditional profit and loss statements to analyze costs such as salaries, equipment, facilities, and administrative expenses. Based on these figures, business managers use direct material and labor consumption as the primary means of determining product costs and sale prices, and apportioning overhead costs. This method has been adequate when the overhead and administrative cost of activities not directly related to production was small compared with the direct material and labor required to manufacture the end product. However, in today's service businesses and manufacturing environments, automation has substantially reduced the amount of direct material and labor consumption, so that indirect activities have become a significant factor contributing to the cost of making the product. The result gives business managers a skewed view of how the business organization spends money, which may cause them to make pricing errors, mis-allocate resources, and make strategic mistakes.

Brief Summary Text (5):
A more reliable and useful way of viewing an organization's operations is to associate costs with activities. Activity-based costing or "ABC" is a method advocated by Peter B. B. Turney in Common Cents: The ABC Performance Breakthrough published by Cost Technology of Hillsboro, Oreg., and is incorporated herein by reference. Activity-based costing measures the cost and performance of activities and products. In product costing applications, for example, activity-based costing allows costs to be apportioned to products by the activities and resources consumed in procuring parts or materials, manufacturing, marketing, selling, delivering, and servicing the product. With activity-based costing information, managers are provided a true gauge of the business operations, and can make better strategic business and management decisions.

Brief Summary Text (10):
In one aspect of the invention, an automated activity-based management system and method for making the same are provided. The business organization has costs associated with its people, facilities, and equipment to produce products or provide services. Such a business organization typically generates traditional general ledger accounting information and human resources information. This traditional accounting information is used along with information directed to activities, equipment usage and facilities utilization to generate costs associated with activities performed by an organization. A computer workstation with a graphical user interface is used to accept entries of activity information. The activity information and traditional accounting information are fed to a relational database. The information is processed and costs associated with the employee, facilities, equipment, and overhead components of activities are computed. User-definable ad-hoc reports as well as preformated reports for trending, forecasting, comparison, benchmarking, and budgeting purposes are available.

Brief Summary Text (11):
In another aspect of the invention, an automated activity-based management system for a business organization occupying facilities, employing people and using equipment to produce products and provide services is provided. The system includes a relational database which receives traditional accounting information and accepts information related to activities provided by the users. The activity information includes the activities performed, the percentage of time each activity is performed, equipment utilization data, and space utilization data. Further included is a people module for processing the traditional accounting information and activity information to generate a people cost component associated with each activity. A facilities module processes the traditional accounting information and activity information and generates a facilities cost component associated with each activity. An equipment module processes the traditional accounting information and activity information and generates an equipment cost component associated with each activity. An overhead module is also provided to process the traditional accounting information and activity information to generate an overhead cost component associated with each activity. A reporting module generates cost summaries of the activities.

Brief Summary Text (12):
In yet another aspect of the invention, an automated activity-based method for managing a business organization is provided. The traditional accounting information normally generated in the business organization is downloaded to a relational database, and activity information including activities performed by employees, the percentage of time employees spend on performing each activity, equipment utilization rates, and facility utilization are provided to the relational database either in the form of user inputs or automated download if the information is already electronically stored and available. Thereafter, a people cost component, a facilities cost component, an equipment cost component, and an overhead cost component associated with each activity are computed. Based on the activity costs and the output resulting from the activities, the value of activities performed by an organization can be accurately determined. According to the activity costs, the activities can be prioritized to emphasize valuable activities and de-emphasize or eliminate wasteful or unnecessary activities. Resources such as facilities and equipment can also be better utilized.

Drawing Description Text (6):
FIG. 4 is another simplified block diagram illustrating exemplary steps and functions performed and relationships between business entities in the automated activity-based management system;

Detailed Description Text (2):
Referring to FIG. 1, a simplified top level block diagram providing an overview of the automated activity-based management system 10 is shown. The system 10 is best suited for use by a business organization which employs people and uses equipment to provide services or produce products. At the heart of the system 10 is a relational database 12 with organized data structures containing raw business data 14 and processed activity cost information 16. Having access to the relational database 12 are data processing modules 18, including, for example, a people module 20, an equipment module 22, a facility module 24, and an overhead module 26 to process and determine the costs applicable to the activities performed in the organization. These data processing modules 18 are described in detail below.

Detailed Description Text (3):
There are at least two data input sources to the relational database 12, including automated system inputs from an existing computer system or mainframe 30 through an

interface 32. The data automatically imported or downloaded from the existing computer 30 may include general ledger (GL) data 34, production measurement system data 36, and human resources system data 38. This accounting data may reside on a data storage device in the form of a database.

Detailed Description Text (4):
Another data source to the relational database 12 is user input on a workstation 40 through a graphical user interface (GUI) 42. The type of information entered by the user in this manner may include, for example, an identification of employees in specific management organizations, employee activity information, equipment and space utilization information, and product information. Details of the automated system input and the user input are set forth below.

Detailed Description Text (6):
Traditionally, a business organization generates and maintains the general ledger data 34, production measurement system data 36, and human resources system data 38, and business decisions and strategies are generally made based on these data. The automated activity-based management system 10 of the present invention takes this traditional accounting information, along with some additional business information provided by the user, and allocates the monetary cost or dollars to the activities performed. For example, the traditional general ledger view of a computer network operation business unit maps the money spent to salaries, hardware, software, maintenance, and space. The activity-based management view maps these same expenditures to activities such as network surveillance, network testing, technical assistance, problem resolution, vendor interaction, and configuration changes. Activity-based management thus provides a more realistic, operational, and meaningful view of how the money was spent.

Detailed Description Text (8):
FIG. 2 is a simplified diagram of the physical components associated with the automated activity-based management system 10. The relational database 12 may be implemented with an Informix database by Informix Software, Inc. of Menlo Park, Calif. The data may be stored on a suitable data storage device 60, such as tapes and disks, and is accessed by a database server 62. A 690MP SPARCserver made by Sun Microsystems of Mountain View, Calif. has been successfully used as the database server 62. The database server 62 is preferably linked to a mainframe computer 64 by a local or wide area network (LAN/WAN) 66 for automated uploading and downloading information therebetween. The database server 62 is further linked by the same or a different local or wide area network or by telecommunications lines through a modem 68 (not shown) to a local file server 68. However, the file server 68 is optional and the workstation 72 may be connected directly to the database server 68 through the LAN/modem 68.

Detailed Description Text (10):
FIGS. 3-5 describe the most basic functions performed by the automated activity-based management system 10. Each site 80 of a business organization is divided into a number of business units or management organizations 82-86. A site 80 is not necessarily defined as a physical location, but may be a business unit for which the general ledger accounts have traditionally assigned resources. For example, a site may be the legal department with offices in several facilities or in different cities. Examples of management organizations 82-86 for a legal department/site may include intellectual property, litigation, and mergers and acquisitions. For each management organization 82-86, all the activities 92 performed to achieve business objectives thereof are identified. For the intellectual property management organization, for example, the activities 92 may include soliciting invention disclosures, drafting patent applications, drafting licensing agreements, and inventor education. These activity names or codes are collected in a master activity dictionary 90, which functions as a glossary of activities for all sites 80. Once the master activity dictionary 90 is set up, subsequent activity identification tasks need only select from the dictionary. If a new or unique activity is identified, it is added to the master activity dictionary 90.

Detailed Description Text (15):
The equipment utilization entry 118 identifies the types of equipment at the site, and provides the percentage of time each piece of equipment is utilized. For example, for a central processing unit (CPU), a time tracking application program may be used to measure equipment utilization in CPU minutes, and this information is provided as a data entry to the relational database 12. When data are electronically created such as the equipment utilization of CPUs, the data may be directly downloaded to the relational database 12 through the database server 62.

Detailed Description Text (26):
Referring to FIG. 8, a simplified block diagram of automated system inputs are shown. As established above in FIG. 2, the automated activity-based management system 10 is coupled to an existing computer 64, which processes and maintains the traditional accounting information. As shown in FIG. 8, the relational database 12 receives or imports three types of information from the existing computer 64. The first is the production measurement system information 150. Production measurement systems may capture product volume information by customer. A second type of information is general ledger information 152, which includes the reporting structure and the actual or budget dollar expenses for each of the cost pools. The reporting structure is the structure of the business organization's cost centers. A third type of information is human resources information on employees, which may include the employee name and number, job category, and the responsibility center.

Detailed Description Text (44):
FIG. 16 provides additional details to the overhead cost component computation. The general ledger account information is used to determine the overhead costs, as shown in block 280. The total overhead cost for the site is then allocated to service providers which make up the overhead of the business organization. The allocation is done according to a percentage of overhead costs controlled by each service provider, as shown in blocks 282. Examples of service providers may include recruiting, legal, human resources, account services, and research and development. The cost for each service provider is then distributed to the management organization level either via user-provided percentages or with an automatic default, as shown in blocks 284 and 286. The default computed percentage is based on the percentage of the management organization's people, space and equipment costs with respect to the total site cost. The percentage then may be used to compute the overhead cost for the management organization, as shown in block 288. Based on the activity percentages, the overhead cost of each activity attributable to the management organization is computed, as shown in block 290. Overhead cost computations are shown in TABLES I and J below.

Detailed Description Text (46):
The automated activity-based management system 10 may generate a number of different reports summarizing information for many business purposes. Examples of the types of reports available are: products, equipment, quality, activity driver, service, value added, user profile, and budget. The various types of reports are summarized below:

Detailed Description Text (56):
Non-Billable Equipment--Shows the non-billable cost and volume detail by equipment type for each processing site. Allows users to view the management organizations at the site which are internally utilizing the equipment as well as any other non-customer business organizations that are consuming resources at the processing site.

CLAIMS:

1. An automated activity-based management system for a business organization having costs associated with its people, facilities, and equipment to produce products and/or provide services, said business organization having accounting information including an accounting structure and expenses stored electronically in a storage device, comprising;

at least one computer workstation having an user interface accepting activity information including information related to percentages of time spent on each activity by the people, and utilization information related to said facilities and equipment;

a relational database coupled to said storage device and said at least one computer workstation automatically downloading, receiving and storing said accounting information from said storage device, and receiving said activity information from said computer workstation; and

a database server coupled to said relational database and said computer workstation dynamically processing said accounting information and said activity information in response to requests received from said computer workstation, and mapping said expenses to the costs associated with the people, facilities, and equipment components of each activity, to determine a component cost allocation for each activity.

8. The automated activity-based management system, as set forth in claim 2, wherein the business organization also has costs associated with overhead, and the system further comprising an overhead module residing in the database server operable to process said

accounting information and said activity information, and generate an overhead cost component associated with each activity.

10. The automated activity-based management system, as set forth in claim 9, wherein said relational database receives and stores an association relationship between said responsibility centers and at least one management organization.

11. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores a master list of activities, a master list of attributes used to classify said activities, a master list of products, and a master list of equipment.

12. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores activity percentage information representing the percentage of time spent by the people on each activity.

13. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores facilities utilization information and equipment utilization information.

14. The automated activity-based management system, as set forth in claim 1, wherein said relational database receives and stores information associated with the business organization structure and how the employees fit within the structure.

15. The automated activity-based management system, as set forth in claim 1, wherein said relational database receives and stores information identifying those activities producing the products.

16. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores a target cost per unit for each of said products.

17. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores product drivers identifying at least one product resulting from each of said activities.

18. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores human resources information including people names and job categories.

19. The automated activity-based management system, as set forth in claim 1, wherein said relational database further receives and stores access code data used for identifying equipment usage by customers and management organizations.

23. An automated activity-based management system for a business organization occupying facilities, employing people and using equipment, the business organization generating traditional accounting information including accounting structures and expenses, comprising:

a relational database automatically receiving said traditional accounting information and accepting information related to activities provided by users, said activity information includes the activities performed, the percentage of time each activity is performed, equipment utilization data, and space utilization data;

a people module operable to process said traditional accounting information and said activity information and generate a people cost component associated with each activity;

a facilities module operable to process said traditional accounting information and said activity information and generate a facilities cost component associated with each activity;

an equipment module operable to process said traditional accounting information and said activity information and generate an equipment cost component associated with each activity; and

a reporting module operable to generate cost summaries, of said activities in response to said generated cost components.

24. The automated activity-based management system, as set forth in claim 23, wherein said business organization is divided into sites, and each site is divided into management organizations, and said equipment module further computes expenses to equipment used to perform the activities in each management organization.

25. The automated activity-based management system, as set forth in claim 24, wherein said relational database further receives and stores activity information including the types of equipment, the utilization rate of each equipment type for satisfying customer requirements and internal usage, and un-utilization rate.

28. The automated activity-based management system, as set forth in claim 23, wherein said business organization is divided into sites, and each site is divided into management organizations, and said people module further allocates expenses to activities performed by the people of each management organization.

29. The automated activity-based management system, as set forth in claim 28, wherein said relational database further receives and stores activity information including people names and job categories for each management organization.

31. The automated activity-based management system, as set forth in claim 23, wherein said business organization is divided into sites, and each site is divided into management organizations, and said facilities module further computes expenses to facilities used to perform the activities in each management organization.

32. The automated activity-based management system, as set forth in claim 31, wherein said relational database further receives and stores activity information including total amount of space at the site, amount of space utilized by people, and amount of space occupied by equipment.

39. The automated activity-based management system, as set forth in claim 23, wherein said traditional accounting information is stored on a storage device, said storage device downloads said traditional accounting information to said relational database.

40. The automated activity-based management system, as set forth in claim 39, further comprising a database server coupled to said relational database and a computer network connecting said storage device and said database server.

41. The automated activity-based management system, as set forth in claim 39, further comprising a database server coupled to said relational database and a computer network connecting said storage device, said database server, and said computer workstation.

42. The automated activity-based management system, as set forth in claim 23, wherein said business organization is divided into sites, and each site is divided into management organizations, and said overhead module further computes expenses to overhead costs in the performance of the activities in each management organization.

43. The automated activity-based management system, as set forth in claim 23, wherein said relational database further receives and stores a master list of activities, a master list of attributes used to classify said activities, a master list of products, and a master list of equipment.

44. The automated activity-based management system, as set forth in claim 23, wherein said relational database receives and stores information identifying those activities producing the products.

45. The automated activity-based management system, as set forth in claim 23, wherein said relational database further receives and stores a target cost per unit for each of said products.

46. The automated activity-based management system, as set forth in claim 23, wherein said relational database further receives and stores product drivers identifying at least one product resulting from each of said activities.

47. The automated activity-based management system, as set forth in claim 23, wherein said accounting structure defines a plurality of responsibility centers, and said business organizations is divided into management organizations, said expenses being captured in said responsibility centers, and said responsibility centers being mappable to said management organizations.

48. The automated activity-based management system, as set forth in claim 23, wherein said relational database further receives and stores human resources information including people names and job categories.

49. The automated activity-based management system, as set forth in claim 23, wherein said relational database further receives and stores access code data used for identifying equipment usage by customers and management organizations.

52. An automated activity-based method for managing a business organization, the business organization occupying facilities and having people using equipment, the business organization generating traditional accounting information including accounts and expenses, the method comprising the steps of:

automatically downloading the traditional accounting information to a relational database;

feeding activity information including activities performed by employees, the percentage of time employees spend on performing each activity, equipment utilization rates, and facility utilization to said relational database;

computing from the activity information and the accounting information a people cost component associated with each activity;

computing from the activity information and the accounting information a facilities cost component associated with each activity;

computing from the activity information and the accounting information an equipment cost component associated with each activity; and

generating reports summarizing said computed cost components associated with each activity.

54. The method, as set forth in claim 53, wherein said overhead component cost computing step comprises the steps of:

computing an overhead cost by cost pool by responsibility center from the traditional accounting information accounts and expenses, the cost pools and responsibility centers being financial divisions of the business organization;

mapping the overhead cost by cost pool by responsibility center to management organizations, the management organizations being functional divisions of the business organization;

computing the overhead costs of the business organizations by management organization;

computing an overhead cost for each activity.

57. The method, as set forth in claim 54, wherein said facilities component cost computing step comprises the steps of:

computing a facilities cost by cost pool by responsibility center from the traditional accounting information accounts and expenses, the cost pools and responsibility centers being financial divisions of the business organization;

mapping the facilities cost by cost pool by responsibility center to management organizations, the management organizations being functional divisions of the business organization;

computing the facilities costs of the business organizations by facility usage;

computing a facilities cost for each activity.

59. The method, as set forth in claim 52, wherein said equipment component cost computing step comprises the steps of:

computing an equipment cost by cost pool by responsibility center from the traditional accounting information accounts and expenses, the cost pools and responsibility centers being financial divisions of the business organization;

mapping the equipment cost by cost pool by responsibility center to management organizations, the management organizations being functional divisions of the business organization;

computing the equipment costs of the business organizations by usage type;

computing an equipment cost for each activity.

61. The method, as set forth in claim 57, wherein said people component cost computing step comprises the steps of:

computing a people cost by job category by responsibility center from the traditional accounting information accounts and expenses, the responsibility centers being financial divisions of the business organization;

mapping the people costs by job category by responsibility center to management organizations, the management organizations being functional divisions of the business organization;

computing a cost per employee by management organization by job category; and

computing a people cost for each activity.

65. The method, as set forth in claim 52, wherein the step of feeding activity information includes the step of feeding information mapping access codes supplied in the traditional accounting information to each management organization, the management organizations being functional divisions of the business organization.